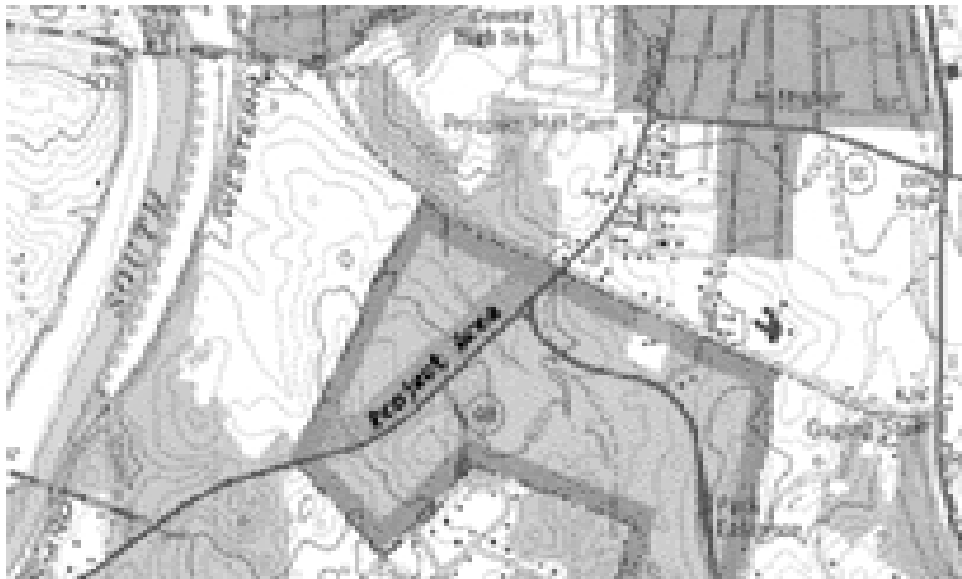


Archeological Investigations for  
the U.S. Route 340 Land Exchange  
Shenandoah National Park  
Warren County, Virginia



Allen H. Cooper  
National Park Service  
Philadelphia Support Office  
1998

## **Management Summary**

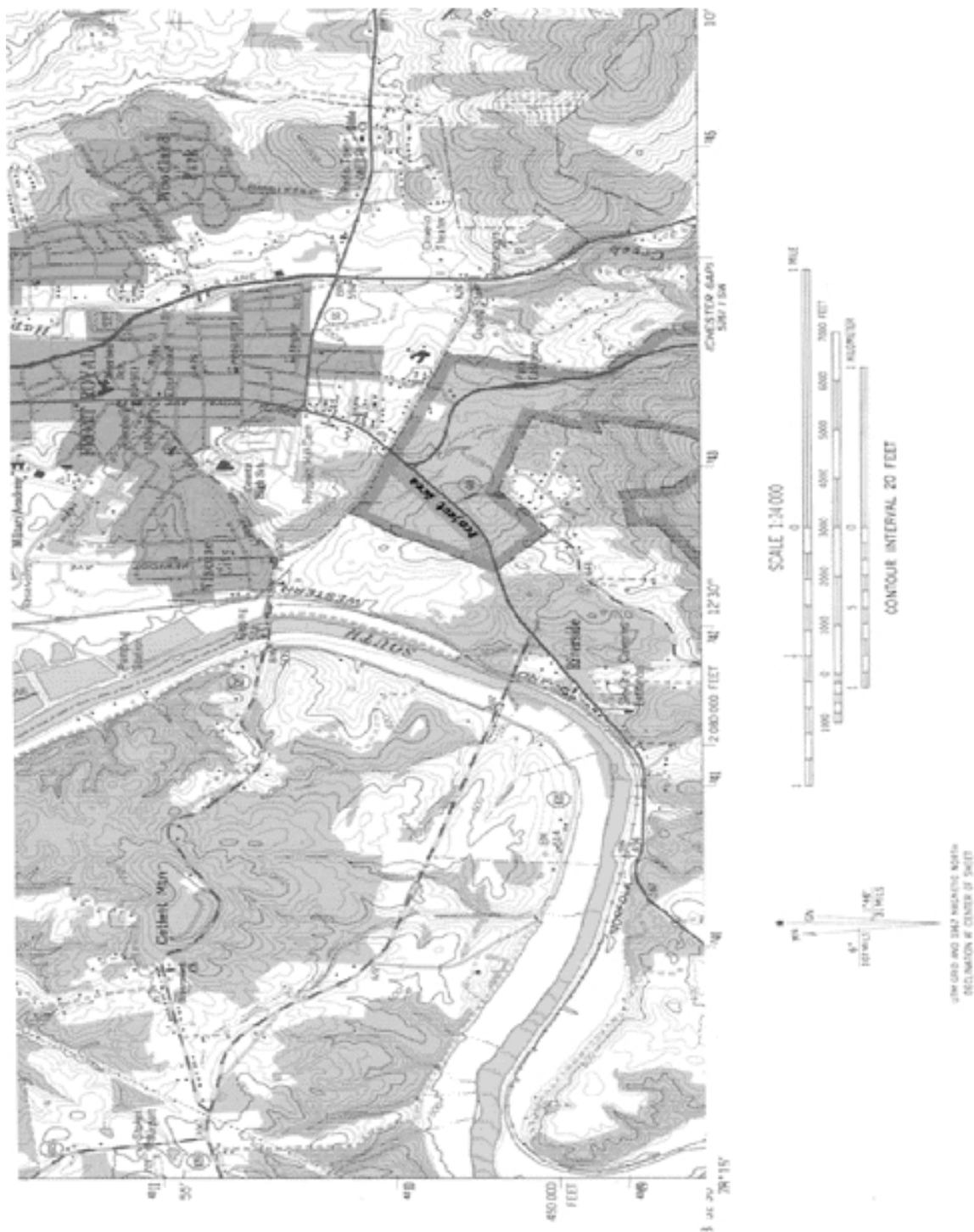
Archeological investigations in support of a land exchange for rerouting U. S. Route 340 within Shenandoah National Park were conducted during the early winter of 1991-1992. Excavation of thirty-seven shovel tests determined that the proposed land exchange parcel associated with Alternative B did not contain archeological resources eligible for inclusion on the National Register of Historic Places.

## **Introduction**

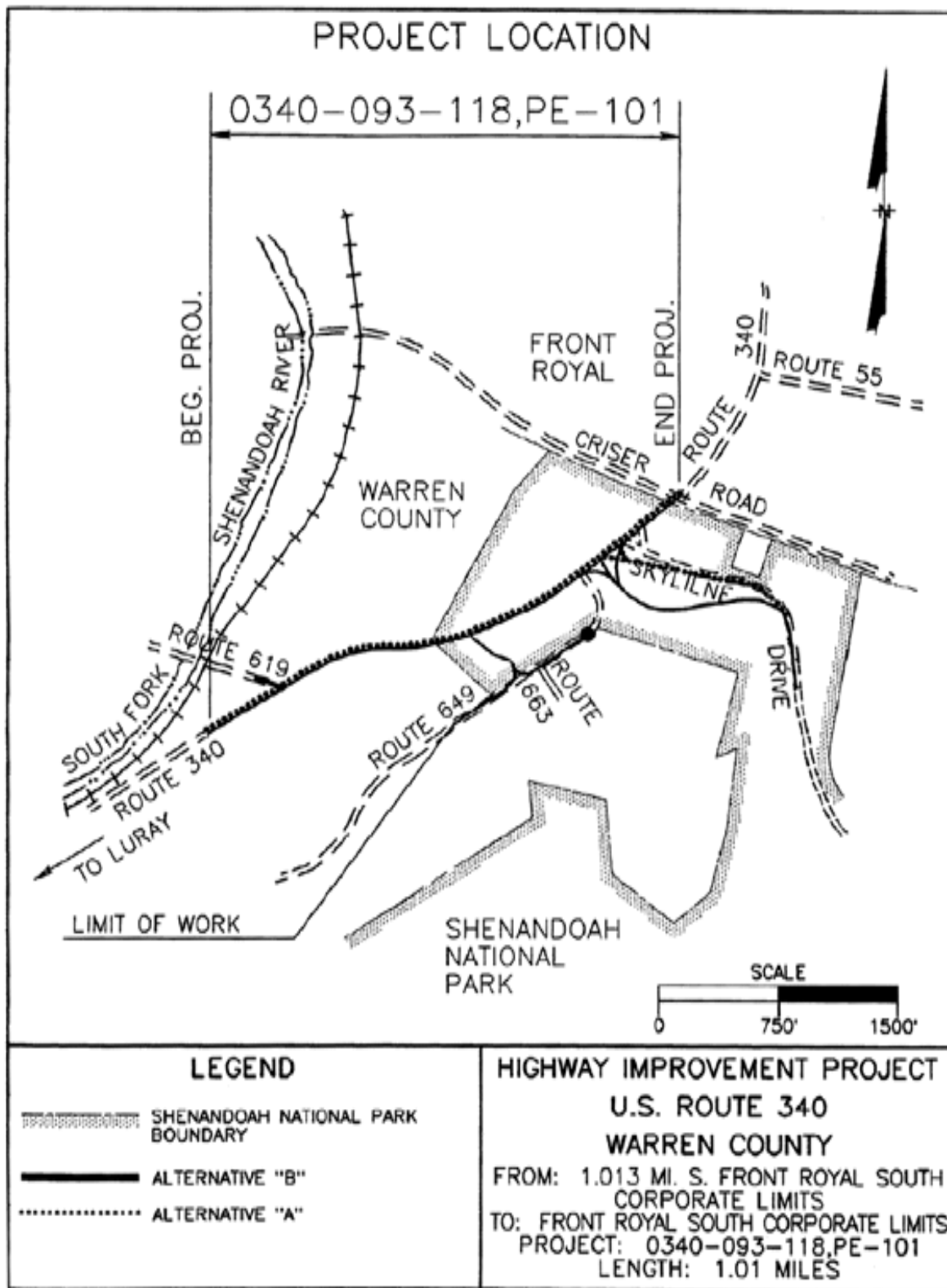
In 1991, the National Park Service and the Commonwealth of Virginia proposed to improve U.S. Route 340 at its intersection with Skyline Drive within Shenandoah National Park near Front Royal, Virginia. The preferred route, Alternative B, required widening the existing road to the west and transferring ownership of 18.4 acres of park land to the Commonwealth (Figures 1, 2 and 3). Under the provisions of Section 110 of the National Historic Preservation Act in effect in 1991, "...each Federal agency shall establish a program to locate, inventory, and nominate to the Secretary all properties under the agency's ownership or control by the agency, that appear to qualify for inclusion on the National Register...Each Federal agency shall exercise caution to assure that any such property that might qualify for inclusion is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly." (16 U.S.C. 470-h-2) In accordance with this statute, the author conducted archeological investigations on December 2-4, 1991 and January 8-9, 1992 to determine if the proposed transfer contained archeological resources eligible for inclusion on the National Register.

## **Background**

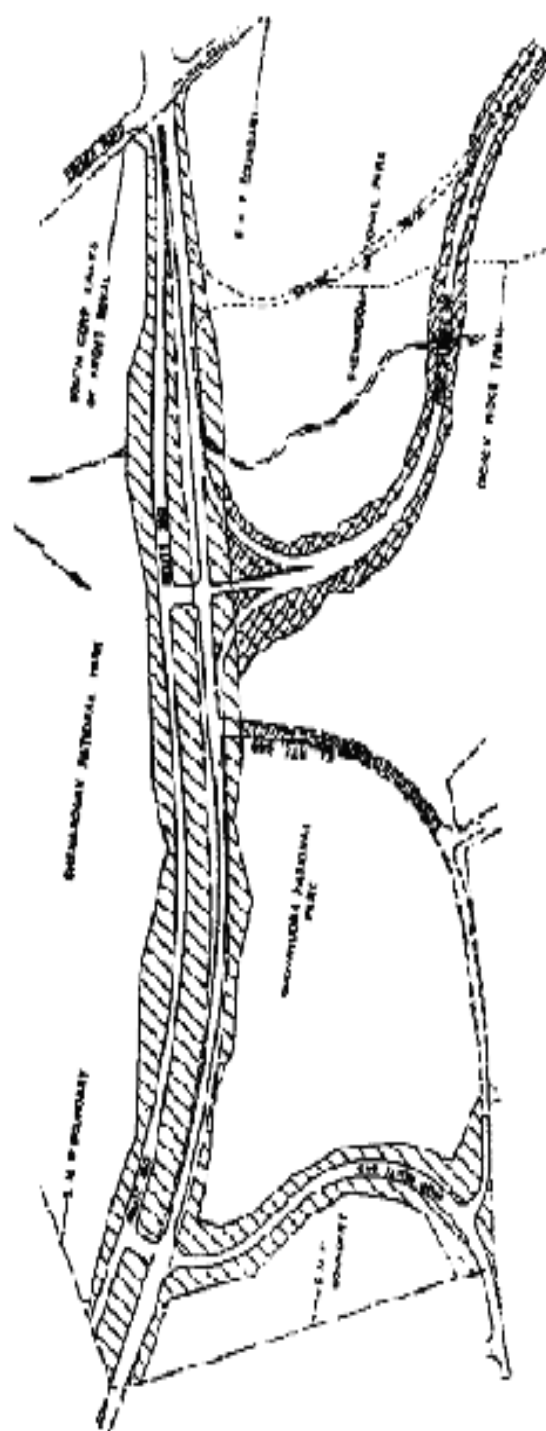
The proposed land exchange lay adjacent to U.S. Route 340 at an elevation between 600 and 610 feet above mean sea level, rising sharply to the east as it climbs toward Dickey Ridge some 900 feet above, and falling away to the west toward the South Fork Shenandoah River some 100 feet below and 2500 feet away. The project area lies at the transition from the Ridge and Valley province and the Blue Ridge province. The former is a major karst region; U.S. Route 340 is lined with numerous sinkholes and caverns with the commercial Skyline Caverns located approximately 3000 feet from the south boundary of the land exchange. The exchange parcel lies on a rolling, carbonate terrain formed in the Beekmantown Formation of Ordovician age which is composed of limestone and dolomites. Soil types along the project area consist of Lodi silt loams and Dyke Loams, both of which are highly erosive. For the Lodi silt loam, a five to six inch layer of dark brown silt loam makes up the surface layer. The subsoil is yellowish red clay about 36 inches thick, while the basal clay is multicolored. The Dyke loams have a five inch surface loam layer colored dark reddish brown. The upper part of the subsoil is dark red clay about 35 inches deep, grading into dark red, silty, cobbly clay loam to at least 60 inches.



**Figure 1:** Location of Proposed Land Exchange (Detail from USGS 1:24000 Series, Front Royal, VA Quadrangle).



**Figure 2:** Proposed Project Location (from Draft EIS).



ROUTE 340 - WARREN CO.  
PROJECT No. C340-093-118, PE 101

### ALTERNATIVE "B" IMPACT TO SHENANDOAH NAT'L PARK




-  14.4 ACRES TO BE ACQUIRED FOR HIGHWAY RIGHT OF WAY.
-  3.2 ACRES PARKLAND TO BE IMPACTED BY CONSTRUCTION. (TO REMAIN SNF LAND)
-  0.5 ACRES TO BE RETURNED TO SNF

Figure 3: Proposed Land Exchange Associated with Alternative B (From Draft EIS; Area Incorrectly Identified as 14.4 Acres; No Associated Scale).

Most of the project area was covered by upland deciduous forest composed of elm, maple, white pine, locust, red cedar, sumac, sycamore and dogwood. Undergrowth was limited within the project area due to the shading of mature trees. The project traversed two unnamed tributaries to the South Fork Shenandoah River. These tributaries are intermittent streams, and drain less than one square mile of forest.

The land exchange lies at the South Corporate Limits of Front Royal, Virginia. Front Royal was founded at the junction of trails crossing Chester and Manassas Gaps. Originally called "Hell Town" it was renamed in 1788 and by 1805 consisted of some sixty houses and served as a milling center (Lambert 1989:152). It became the seat of the new Warren County in 1836, and in 1854 was linked by railroad through Manassas Gap. The Civil War left the town in ruins but was rebuilt and now acts as a major gateway to the park. Historical investigation conducted by the College of William and Mary indicated little likelihood for the presence of historic resources in the land exchange area.

Prehistoric archeological investigations near the project area have focused on rehabilitation of Skyline Drive along the Blue Ridge summit (Inashima 1993). Investigation of those areas identified sites dating from the Paleo-Indian through the Historic periods although all at a considerable distance (15-20 miles). All are characterized as either short-term or ephemeral occupations (Inashima 1993: 117). The investigation area, lying in a narrow natural corridor between the base of the Blue Ridge and the South Fork Shenandoah River, has a reasonably high probability for prehistoric resources which was the primary focus of this investigation.

Much of the land within the proposed exchange parcel had been modified by the construction of U. S. Route 340, especially in the southern 700 feet. The limits of the land exchange and the visible disturbance from road construction within the southern portion of the parcel precluded testing in that area. Excavations were limited to the northern 850 feet and are described below.

### **Field Investigations**

#### **Data Collection Standards:**

All fieldwork and laboratory analysis was conducted in conformance with "Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines". All soils were passed through one-quarter inch hardware cloth with recovered artifacts placed in plastic bags by provenience. All artifacts were collected and cataloged to Automated National Catalog System standards and the standards of the National Park Service's Manual for Museums. All artifacts and associated documentary materials are on deposit at Shenandoah National Park. All project activities were conducted by the author, with assistance during the second phase of field investigations provided by Regional Archeologist David G. Orr.

## Test Excavations:

Thirty-seven shovel tests were excavated within the investigation area (Figure 4). Located at 50 foot intervals, all tests were of relatively uniform diameter, generally 1.2- 1.4 feet, and excavated into the sterile clayey subsoil, or terminated at the maximum depth of possible hand excavation (Figure 5). Detailed results of each test are presented in Appendix 1. The tests lay in three distinct, although limited topographic zones; a relatively flat plateau in the northern portion of the area (Tests 1-18), the slopes and bottom of the northernmost intermittent stream toward the center of the area (Tests 19-30), and the low ridges at the south of the tested area (Tests 30-38). Total elevation change over the entire area is limited to only 10-15 feet with the probable cause of the variation due to localized erosion and colluvial deposition.

Tests 1 through 5, located on the northern end of the plateau on the northern end of the tested area, are characterized by simple stratigraphy consisting of a medium thick (0.6 foot) layer of reddish brown loam that overlies reddish brown clay. The southern end of this plateau exhibits a more complex stratigraphy. Tests 6 through 18 are characterized by a layer of reddish brown loam averaging 0.4 foot thick that overlies a layer of reddish brown clay loam averaging 0.6 foot thick. The reddish brown clay subsoil underlies most of the tests. This profile is similar to that described for Lodi silt loams and may be considered relatively unmodified by human activity. Two of the three artifacts recovered from the investigations were found in this area. Test 6 contained a single fragment of whiteware ceramic which dates from 1810 to the present. Test 7 contained a fragment of iron strapping of unknown date and function. Neither were found in contexts suggesting organized activity.

Tests 19 through 30 were located either within the bed of the northernmost intermittent unnamed stream or on its broad eroded slopes. Stratigraphy in this area was variable, containing mottled soils, many with moderate to abundant quantities of stones. Test 13 contained a single fragment of clear glass that had probably been discarded from the adjacent road.

Tests 31 through 34, and Test 37 were located on parallel east/west ridges south of the intermittent stream. Their stratigraphy is characterized by a layer of grayish brown loam averaging 0.35 foot thick overlying a layer of reddish brown clay loam that extended to the average depth of 1.2 feet below surface. Beneath this lay the reddish brown clay subsoil. This profile is similar to the one described for Lodi silt loam soils.

Two intermediate tests between the ridges within a shallow basin are indicative of the localized erosion within the then-proposed exchange area. Tests 35 and 36 contained grayish brown loam from the surface to at least the depth of 2.0 feet. This topsoil had clearly been deposited from adjacent sources.

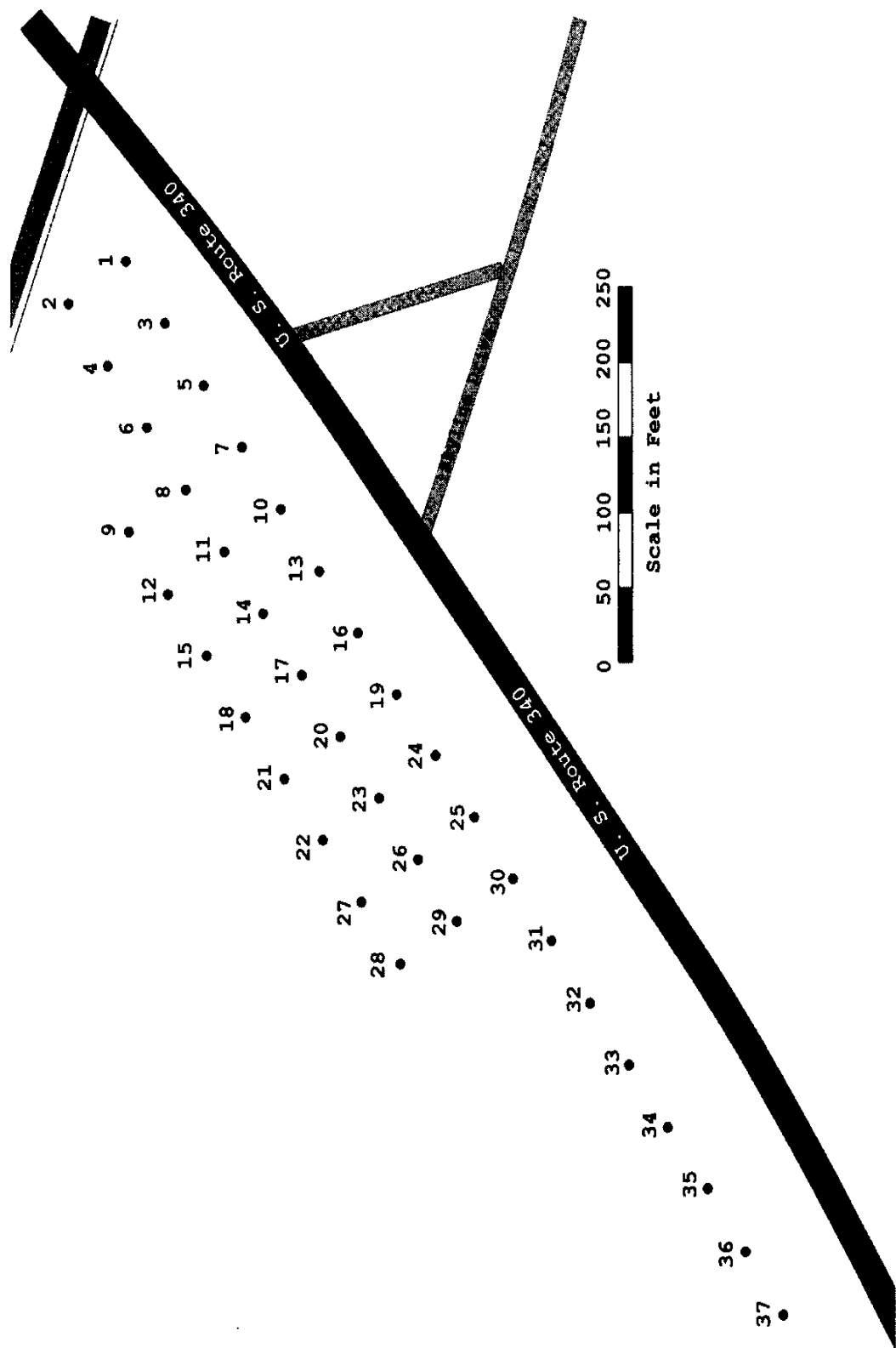
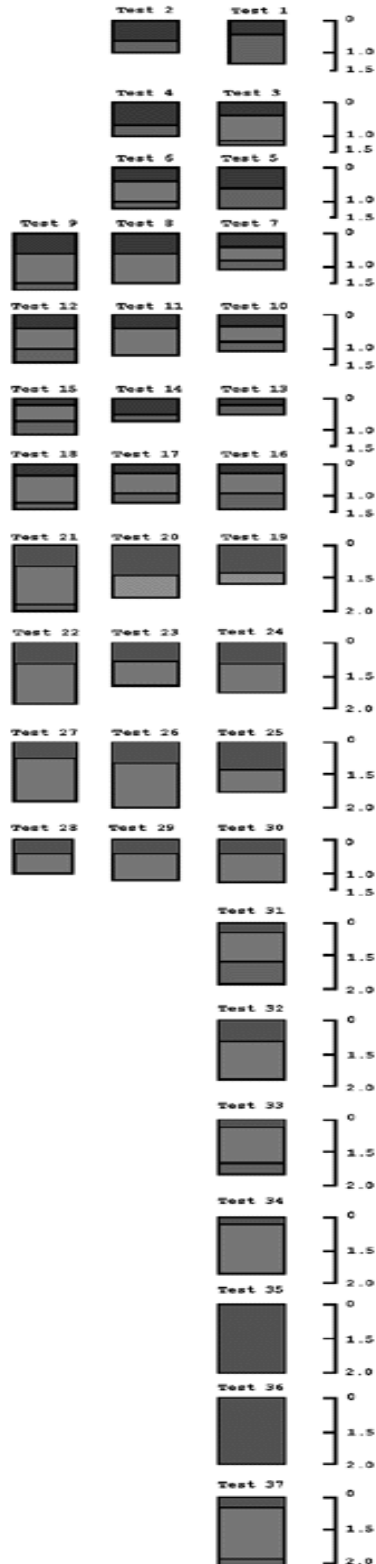


Figure 4: Location of Archeological Tests.





**Figure 5:**  
**Shovel Test Profiles**  
**U.S. Route 340**  
**Land Exchange**  
**Shenandoah National Park**

■ Reddish brown loam  
 ■ Grayish brown loam  
 ■ Reddish brown clay loam  
 ■ Reddish brown clay  
 ■ Mottled grayish brown and yellow brown loam  
 (All Measures in Feet)



## Summary and Conclusions

Excavation of thirty-seven shovel tests within the proposed land exchange area associated with Alternative B exhibited stratigraphy typical of local culturally unmodified soils. Only two artifacts were recovered that may predate the founding of the park, but they are of types that remain in common manufacture and present use. Testing indicated that no archeological resources that may be eligible for listing on the National Register of Historic Places exist within the proposed land exchange.

## Bibliography

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1993 Archeological Investigations within the North District of Shenandoah National Park, Virginia. United State Department of the Interior, National Park Service, Denver Service Center Applied Archeology Center. Silver Spring, Maryland.

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Virginia Department of Transportation

1991 Draft Environmental Impact Statement U.S. Route 340 Warren County, Virginia. Manuscript on file, Shenandoah National Park.

## Appendix I: Shovel Test Stratigraphy

### Test 1

0 - 0.4 fbs      Reddish brown loam

0.4 - 1.3+ fbs   Reddish brown clay

### Test 2

0 - 0.6 fbs      Reddish brown loam

0.6 - 1.0+ fbs   Reddish brown clay

### Test 3

0 - 0.6 fbs      Reddish brown loam

0.6 - 1.0 fbs    Reddish brown clay loam

1.0 - 1.1+ fbs   Reddish brown clay

### Test 4

0 - 0.7 fbs      Reddish brown loam

0.7 - 1.0+ fbs   Reddish brown clay

### Test 5

0 - 0.6 fbs      Reddish brown loam

0.6 - 1.0+ fbs   Reddish brown clay

### Test 6

0 - 0.4 fbs      Reddish brown loam

0.4 - 1.0 fbs    Reddish brown clay loam

1.0 - 1.1+ fbs   Reddish brown clay

### Test 7

0 - 0.4 fbs      Reddish brown loam

0.4 - 0.8 fbs    Reddish brown clay loam

0.8 - 1.1+ fbs   Reddish brown clay

### Test 8

0 - 0.6 fbs      Reddish brown loam

0.6 - 1.5 fbs    Reddish brown clay loam

### Test 9

0 - 0.6 fbs      Reddish brown loam

0.6 - 1.5 fbs    Reddish brown clay loam

1.5 - 1.6+ fbs   Reddish brown clay

Test 10

0 - 0.3 fbs	Reddish brown loam
0.3 -0.8 fbs	Reddish brown clay loam
0.8 - 1.1+ fbs	Reddish brown clay

Test 11

0 - 0.4 fbs	Reddish brown loam
0.4 -1.2 fbs	Reddish brown clay loam

Test 12

0 - 0.4 fbs	Reddish brown loam
0.4 -1.0 fbs	Reddish brown clay loam
1.0 - 1.4+ fbs	Reddish brown clay

Test 13

0 - 0.2 fbs	Reddish brown loam
0.2 -0.5 fbs	Reddish brown clay

Test 14

0 - 0.5 fbs	Reddish brown loam
0.5 - 0.7+ fbs	Reddish brown clay

Test 15

0 - 0.2 fbs	Reddish brown loam
0.2 -0.7 fbs	Reddish brown clay loam
0.7 - 1.1+ fbs	Reddish brown clay

Test 16

0 - 0.3 fbs	Reddish brown loam
0.3 -0.9 fbs	Reddish brown clay loam
0.9 - 1.4+ fbs	Reddish brown clay

Test 17

0 - 0.3 fbs	Reddish brown loam
0.3 -0.9 fbs	Reddish brown clay loam
0.9 - 1.2+ fbs	Reddish brown clay

Test 18

0 - 0.4 fbs	Reddish brown loam
0.4 -1.2 fbs	Reddish brown clay loam
1.0 - 1.1+ fbs	Reddish brown clay

Test 19

0 - 0.8 fbs      Grayish brown loam  
0.8 - 1.2 fbs    Mottled grayish brown and  
                         yellow brown loam.

Test 20

0 - 0.9 fbs      Grayish brown loam  
0.9 - 1.6+ fbs   Mottled grayish brown and  
                         yellow brown loam.

Test 21

0 - 0.6 fbs      Grayish brown loam  
0.6 - 1.8 fbs    Reddish brown clay loam  
1.8 - 1.9+ fbs   Reddish brown clay

Test 22

0 - 0.6 fbs      Grayish brown loam  
0.6 - 1.8 fbs    Reddish brown clay loam

Test 23

0 - 0.5 fbs      Grayish brown loam  
0.5 - 1.3 fbs    Reddish brown clay loam

Test 24

0 - 0.6 fbs      Grayish brown loam  
0.6 - 1.5+ fbs   Reddish brown clay loam

Test 25

0 - 0.8 fbs      Grayish brown loam mixed      with reddish brown clay loam  
0.8 - 1.5+ fbs   Grayish brown loam

Test 26

0 - 0.6 fbs      Grayish brown loam  
0.6 - 2.0+ fbs   Reddish brown clay loam

Test 27

0 - 0.5 fbs      Grayish brown loam  
0.5 - 1.8+ fbs   Reddish brown clay loam

Test 28

0 - 0.4 fbs      Grayish brown loam  
0.4 - 1.0+ fbs   Reddish brown clay loam

Test 29

0 - 0.4 fbs      Grayish brown loam  
0.4 - 1.2+ fbs   Reddish brown clay loam

Test 30

0 - 0.4 fbs      Grayish brown loam  
0.4 - 1.7+ fbs   Reddish brown clay loam

Test 31

0 - 0.3 fbs      Grayish brown loam  
0.3 - 1.2 fbs    Reddish brown clay loam  
1.2 - 1.9+ fbs   Reddish brown clay

Test 32

0 - 0.6 fbs      Grayish brown loam  
0.6 - 1.8 fbs    Reddish brown clay

Test 33

0 - 0.2 fbs      Grayish brown loam  
0.2 - 1.3 fbs    Reddish brown clay loam  
1.3 - 1.7+ fbs   Reddish brown clay

Test 34

0 - 0.2 fbs      Grayish brown loam  
0.2 - 1.7+ fbs   Reddish brown clay

Test 35

0 - 2.0+ fbs    Grayish brown loam

Test 36

0 - 2.0+ fbs    Grayish brown loam

Test 37

0 - 0.3 fbs      Grayish brown loam  
0.3 - 1.9 fbs    Reddish brown clay loam  
1.9 - 2.0+ fbs   Reddish brown clay